DMITRIYEV, V.M.

Development of municipal low-voltage power distribution network.
Trudy LIEI no.41:128-140 '62.

Choice of optimum loads for network transformer stations.
Ibid.:165-173 (MIRA 17:6)

1. Leningradskiy inzhenerno-ekonomicheskiy institut.

DMITRIYEV, V.M., inzh.; LIPMAN, R.A., kand.tekhn.nauk

Transistor time relays. Vest. elektroprom. 34 no.2:45-50 F '63. (MIRA 16:2)
(Electric relays)

DMITRIYEV, V.M.

Comparison of different methods for designing closed-loop low-voltage power distribution networks and selection of a calculation method applicable to different conditions. Trudy LIEI no. 49:7-15 '63. (MIRA 17:6)

AYZENBERG, B.L.; BERKHMAN, Ye.I.; DMITRIYEV, V.M.; KLEBANOV, L.D.; SHAROVA, L.I.

Unit norms of electric power spent on communal and everyday requirements of the population and unit loads in the future according to districts in the U.S.S.R. Trudy LIEI no.51:9-52 '64. (MIRA 18:11)

L 22430-66

ACC NR: AP6013616 SOURCE CODE: UR/0105/65/000/011/0071/0075

AUTHOR: Ayzenberg, B. L. (Doctor of technical sciences); Dmitriyev, V. M. (Candidate of technical sciences); Klebanov, L. D. (Candidate of technical sciences); Sharova, L. I. (Engineer); Berkhman, Ye. I. (Candidate of economical sciences) 23 B

ORG: [Ayzenberg, Dmitriyev, Klebanov, Sharova] LIEI im. P. Tol'yatta; [Berkhman] Lengiproinzhproyekt

TITLE: Engineering-economic reasons for the choice of the type of energy for household consumption in the cities of the USSR

SOURCE: Elektrichestvo, no. 11, 1965, 71-75

TOPIC TAGS: electric power production, economics, electric industry

ABSTRACT: The department of electric energy of LIEI (Leningrad Engineering-Economic Institute) carried out over a number of years investigations of the specific needs of household and communal consumers of electricity. These studies resulted in the establishment of standards of consumption of electric energy for the various regions and various types of consumers (Udel'nyye elektropotreblenlya na zhilishchno-bytovyye i kommunal'nyye nuzhdy nagruzki na perspektivnyy period po rayonam SSSR /Specific norms of needs for electricity of household and communal consumers and specific loads for the projected period according to the rayons of the USSR/, Trudy LIEI-LENTOEP (Reports of the

Card 1/2 UDC: 338.40:621.3

L 22430-66

ACC NR: AP6013616 O

LIEI-LENTOEP), No 51, 1964). In particular, their calculated average for the entire Soviet Union is 1740 kWh per year per person. There is, however, no uniform view on this problem and the conference for electrification of households held in 1961 recommended the adoption of 2,000 kWh per year per person as the number to be used in the planning of future needs. The authors of this article take issue with this and other such figures which they consider exaggerated, and after an extensive discussion centering mostly on the gas versus electricity controversy show that 1) the engineering-economical calculations indicate that in all regions which can procure natural gas the use of gas for cooking is undoubtedly less expensive; 2) flow type water heaters cannot compete with any type of gas water heating (natural or artifically produced gas); 3) rayons in the Soviet Union which do not need air-conditioning cannot hope to satisfy economically their needs for heat by means of electricity (except for rayons which have an ample supply of inexpensive hydroelectric power, and where fuel is expensive on account of transportation difficulties). Orig. art. has: 2 tables. [JPRS]

SUB CODE: 09, 05 / SUBM DATE: 11Jan65 / ORIG REF: 015

Card 2/2 BLG

23725
S/057/61/031/006/009/019
B116/B203

9,1300

AUTHORS: Sedykh, V. M., Zorkin, A. F., Dmitriyev, V. M., Lyapunov, N.V., and Yatsuk, L. P.

TITLE: Parameters of H-shaped waveguides in millimeter and centimeter wave bands

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 6, 1961, 699-703

TEXT: The authors divide the papers theoretically determining the parameters of H-shaped waveguides into two groups: (1) papers by foreign authors: S. Cohn (Ref. 1: Proc. IRE, 35, 783-788, August, 1947), K. Tomiyasu, L. Swern (Ref. 2: Proc. Nat. Electr. Cont., 10, 76-82, 1954), S. Hopfer (Ref. 3: Trans. IRE, MMT-3, no. 3, 1955), using the method of equivalent schemes; (2) papers by L. N. Deryugin (Ref. 4: Radiotekhnika, no. 6, 1948), A. Ya. Yashkin (Ref. 5: Uch. zap. MGPI imeni Lenina, 101, 1957), N. F. Funtova (Ref. 6: Uch. zap. MGPI imeni V. I. Lenina, 88, 1954), using the more accurate electrodynamic method of determining the eigenvalue (critical frequency) of the H-shaped waveguide (working on the basic wave H_{10}). The authors of the present paper calculated the main parameters

Parameters of H-shaped waveguides ...

of H-shaped waveguides: the critical frequency, the damping constant, the peak power, and the characteristic resistance, from a uniform standpoint, on the basis of the solution of the field equations. They present the scheme of calculation, the final formulas for calculating the parameters of H-shaped waveguides, and numerical data of these parameters for some H-shaped waveguides developed and tested at the Khar'kovskiy universitet (Khar'kov University). When determining the critical frequency (the eigenvalue) χ, they only study the two ranges I and II (Fig. 1), and obtain

$$\frac{\operatorname{tg}\varkappa a}{\varkappa}=\frac{g\operatorname{ctg}\varkappa b}{\varkappa h}+\frac{2}{gh}\sum_{n=1}^{\infty}\frac{\operatorname{ctg}s_n b}{s_n}\frac{\sin^2 p_n g}{p_n^2}. \qquad (6)$$

for the calculation of χ in first approximation. $p_n = \frac{\pi}{h}$; $\chi^2 = p_n^2 + s_n^2$; n = 0, 1, 2... In a similar way, they obtain the formula

$$\frac{\operatorname{ctg}\varkappa a}{\varkappa}+\frac{g\operatorname{ctg}\varkappa b}{\varkappa h}=\frac{2}{gh}\sum_{n=1}^{\infty}\frac{\sin^2 s_n g}{s_n^2}\frac{\operatorname{ctg}p_n b}{p_n}, \qquad (7)$$

for an H_{20} wave. $s_n = \frac{\pi}{h}n$; $s_n^2 + p_n^2 = \chi^2$; n = 0, 1, 2, ... In the practice, the H_{20} wave is the wave nearest to the basic wave (and

therefore the most dangerous one) for the dimensions of the cross section of H-shaped waveguides. Thus, the pass-band of the H-shaped waveguide is obtained by determining the critical frequencies of the waves H_{10} and H_{20} from (6) and (7). The other parameters of an H-shaped waveguide had been calculated in a paper by V. M. Sedykh (Ref. 7: Izv. vyssh. uchebn. zaved. MVO SSSR, Radiotekhnika, no. 3, 1959). Further studies, however, showed that more accurate results nearly equal to the test results were obtained by using the formula

$$W_{\tau} = \frac{1}{2}\mathrm{Re}\int_{S}[\mathbf{EH}^*]\,ds. \qquad (8)$$

for determining the power transmitted by a waveguide of complicated cross section. In this case, the damping constant α at frequencies higher than the critical one can be determined from

$$\alpha = \frac{1}{2}\frac{R_s\int_{l}|H_t|^2\,dl}{\mathrm{Re}\int_{S}[\mathbf{EH}^*]\,ds}. \qquad (9)$$

where $R_s = \sqrt{\frac{\pi f \mu}{\sigma}}$. For an H-shaped waveguide,

Parameters of H-shaped waveguides ...

$$\alpha=\frac{R_s\left[\left(\frac{f_c}{f}\right)^2 V+U\right]}{T\sqrt{1-\left(\frac{f_c}{f}\right)^2}}. \qquad (10)$$

is written down, where $V=\frac{g^2\cos^2\varkappa a}{h^2\sin^2\varkappa b}\left[\frac{\sin 2\varkappa b}{\varkappa}+2(h+d\cos^2\varkappa b)\right]-\frac{\sin 2\varkappa a}{\varkappa}$,

$$U=a+\frac{\sin 2\varkappa a}{2\varkappa}+\frac{g^2\cos^2\varkappa a}{h^2\sin^2\varkappa b}\left(b-\frac{\sin 2\varkappa b}{2\varkappa}\right),$$

$$T=240\pi g\left[a+\frac{\sin 2\varkappa a}{2\varkappa}+\frac{g}{h}\frac{\cos^2\varkappa a}{\sin^2\varkappa b}\left(b-\frac{\sin 2\varkappa b}{2\varkappa}\right)\right].$$

For the peak power of the waveguide, $\hat{W}_{t_1}=\frac{\hat{E}^2}{2\eta_1}T\sqrt{1-\left(\frac{f_c}{f}\right)^2}=\hat{W}_{t|\infty}\sqrt{1-\left(\frac{f_c}{f}\right)^2}$. (12) is obtained, where $\hat{W}_{t_\infty}=\frac{\hat{E}^2 T}{2\eta_1}$ is the peak power at an infinitely high frequency, and $\eta_1=\sqrt{\mu_1/\varepsilon_1}$. In analogy to the rectangular waveguide, the characteristic resistance Z is calculated from $Z=v_{eff}^2/W_t$ (13), where v_{eff} is the maximum effective voltage between the steps and W_t is the transmitted power. From (12) and (13), the authors obtain

Parameters of H-shaped waveguides ...

$$Z = \frac{Z_\infty}{\sqrt{1 - \left(\frac{f_c}{f}\right)^2}} \qquad (14)$$

for the H-shaped waveguide, where $Z_\infty = \frac{4\pi^2 r^2}{T}$ is the characteristic resistance of the H-shaped waveguide at an infinitely high frequency ($f=\infty$). From formulas (6), (7), (10), (12), and (14), they compute the parameters for six H-shaped waveguides, and plot the curves $\alpha(f)$. There are 4 figures, 2 tables, and 9 references: 5 Soviet-bloc and 4 non-Soviet-bloc.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo (Khar'kov State University imeni A. M. Gor'kiy)

SUBMITTED: July 11, 1960

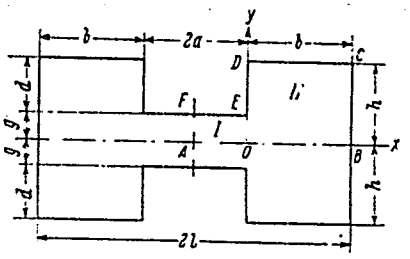

Fig. 1

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23727
S/057/61/031/006/011/019
B116/B203

9,1300

AUTHORS: Dmitriyev, V. M., Zorkin, A. F., Lyapunov, N. V., and Sedykh, V. M.

TITLE: Approximation method for calculating the eigenfrequencies of irregular limit resonators

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 6, 1961, 712-716

TEXT: The approximation method described in the present paper is based on the use of the cross-section method, and yields rather simple and sufficiently accurate formulas for determining the resonance wavelengths of irregular limit resonators. First, the problem is formulated and a general solution is given. The authors consider a section of a tapered irregular waveguide (Fig. 1) made of an ideally conducting metal. The other end of the waveguide is assumed to be closed with a stopper; the waveguide is excited at that end. At certain frequencies, such a device will behave like a resonator. The relation between the reconance wavelengths of such a resonator and its dimensions is to be determined. The cross-section method developed by B. Z. Katsenelenbaum (Ref. 3: DAN SSSR,

102, no. 4, 1955) is used for the calculation. The authors study an element lying between the planes S_1 and S_2 and the lateral resonator surface, assuming that the lateral surface only slightly differs from a cylindrical one. Then, $dz/dt = v_{Ph}(z)$ (1) holds with sufficient accuracy, where $v_{Ph}(z) = v_0 / \sqrt{1 - [\lambda_0/\lambda_c(z)]^2}$ is the phase velocity of the wave in the cylindrical waveguide; $\lambda_c(z)$ is the critical wavelength of the cylindrical waveguide; and λ_0 is the wavelength in the free space. After separating the variables, (1) is transformed:

$$\int_0^{p\frac{T}{2}} dt = \int_0^{p\frac{\lambda_d}{2}} \frac{1}{v_0} \sqrt{1 - \left[\frac{\lambda_0}{\lambda_c(z)}\right]^2}\, dz. \qquad (2)$$

where λ_d is the wavelength in an irregular limit waveguide, T is the oscillation period, p = 1, 2, 3, ... It is assumed that the critical cross section totally reflects the electromagnetic waves like a metal wall.

In this case, the resonance condition reads: $\lambda_0=\lambda_p=\lambda_c(z)|_{z=p}\frac{\lambda_r}{2}$. (3), $\lambda_p=\lambda_r$ is the resonance wavelength of an irregular limit resonator. If $\lambda_c(z)$ is known, the resonance wavelengths can be determined from (2) and (3). $\lambda_c(z)$ must be determined separately for every resonator shape. Now, the authors study a conical limit resonator of any cross-section shape. With the use of the similarity of the resonator cross sections, they obtain the formula $\frac{p\lambda_c(0)}{2d}=\alpha-\arctan\alpha$ (6), where $\alpha=\sqrt{\left[\frac{\lambda_c(0)}{\lambda_0}\right]^2-1}$. If p, $\lambda_c(0)$, and d are known, it is possible to determine α, and, therefore, also the resonance wavelength, because $\lambda_p=\lambda_0=\frac{\lambda_c(0)}{\sqrt{1+\alpha^2}}$. (7), where $\lambda_c(0)$ is the critical wavelength of the cylindrical waveguide of the cross-section S; d is the cone height. With the use of (6) and (7), it is possible to determine the resonance wavelengths of conical resonators of any cross-section shape (H, [illegible], and others) for which the critical

wavelength is known. Conical resonators of rectangular and round cross section are studied as examples. For the former case,

$$\frac{abp}{d\sqrt{(mb)^2 + (na)^2}} = \alpha - \arctan\alpha \qquad (8)$$ and

$$\lambda_r = \frac{2ab}{\sqrt{(mb)^2 + (na)^2}\sqrt{1 + \alpha^2}} \qquad (9)$$ are written down instead of (6) and (7). For the latter case, $\frac{\pi p \tan\theta}{u_{mn}} = \alpha - \arctan\alpha$ (10) and

$$\lambda_r = \frac{2\pi a}{u_{mn}\sqrt{1 + \alpha^2}} \qquad (11)$$ are written down for E waves, and

$\frac{p\pi \tan\theta}{u'_{mn}} = \alpha - \arctan\alpha$ (12) and $\lambda_r = \frac{2\pi a}{u'_{mn}\sqrt{1 + \alpha^2}}$ (13) for H waves,

where u_{mn} are the roots of the Bessel function and u'_{mn} are the roots of the derivative of the Bessel function. To check the formulas obtained, the authors determined the resonance wavelengths of rectangular, irregular

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Approximation method for calculating ...

limit resonators by experiment. They examined two resonators with $a = 20$ mm, $a_1 = 16.6$ mm, $d_1 = 280$ mm, $a = 23$ mm, $a_1 = 17$ mm, and $d_1 = 120$ mm, respectively, where the narrow cross section was unchanged over the length and equal to $b = 10$ mm. The resonators were excited by the H_{10} wave. Since λ_c does not depend on b in this case, formulas (8) and (9) could be checked with these resonators. Measurements were made by the "sucking-off" method in the three-centimeter band. The experimental test showed that the formulas obtained are usable for the practical calculation of conical limit resonators. There are 4 figures, 3 tables, and 5 Soviet-bloc references.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo (Khar'kov State University imeni A. M. Gor'kiy)

SUBMITTED: July 27, 1960

Card 5/6

ACCESSION NR: AR4023752 S/0274/64/000/001/A056/A057

SOURCE: RZh. Radiotekhnika i elektrosvyaz', Abs. 1A359

AUTHOR: Shubarin, Yu. V.; Dmitriyev, V. M.; Lyapunov, N. V.

TITLE: Radiation from the open end of a waveguide of complicated shape

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 132, 1962, Tr. radiofiz. fak., v. 7, 33-41

TOPIC TAGS: antenna, waveguide open end antenna, h shaped waveguide, cruciform waveguide, directivity pattern, matching with free space, Kirchhoff integral

TRANSLATION: Expressions are obtained for the directivity pattern of the open ends of an H-shaped or cruciform waveguide in the E and H planes. Unlike the known mirror-antenna radiators, made in the

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ACCESSION NR: AR4023752

form of a rectangular or round waveguide, the H-shaped and cruciform radiators ensure better matching with the free space and extend the possibility of obtaining a directivity pattern of desired shape. The Kirchhoff integral is used to calculate the field. The formulas obtained are used to calculate the directivity pattern. An Experimental investigation has shown that the measured diagrams are 20--40% narrower than the theoretical ones for all the radiators. The best matching with free space is afforded by the cruciform radiator. Bibliography, 3 titles. N. B.

DATE ACQ: 03Mar64 SUB CODE: GE, SP ENCL: 00

Card 2/2

TOPIC TAGS: resonator, cutoff resonator, waveguide, oscillation, frequency calculation

TRANSLATION: Gives refined formulas for the natural frequencies of irregular cut-off resonators with E_{mns} and H_{mns} waves. The resonator is a segment of a waveguide, tapering gradually at one end. Excitation occurs through the iris at the wide end of the resonator. The problem is solved without taking into account attenuation in the walls of the resonator and the mutual influence of various types of oscillations. For the given type of oscillations the critical cross section is considered.

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ACCESSION NR: AR4044065

equivalent to an ideally conducting wall. There is examined the case of a reso-
nator whose generatrixes intersect at one point (conical resonator)
given the results of an experimental check
the natural

ACCESSION NR: AR4023757 S/0274/64/000/001/A060/A060

SOURCE: RZh. Radiotekhnika i elektrosvyaz', Abs. 1A384

AUTHORS: Dmitriyev, V. M.; Lyapunov, N. V.; Tereshchenko, A. I.; Chaban', A. Ya.

TITLE: Experimental investigation of electronic tuning of an irregular cutoff resonator

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 132, 1962, Tr. Radiofiz. fak., v. 7, 75-77

TOPIC TAGS: cutoff resonator, cutoff cavity, irregular cutoff resonator, resonator tuning range, electronic tuning

TRANSLATION: The dependence of the tuning of a rectangular cutoff resonator on the electron beam current passing through the critical section of the resonator was investigated experimentally. The reso-

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ACCESSION NR: AR4023757

nator dimensions were: a = 26 mm, a_1 = 12 mm, d = 86 mm, b = 10 mm, where a and a_1 -- lengths of the resonator broad wall, b -- length of the narrow wall, and d -- length of the resonator. The resonant wavelength for the H_{101} mode was 35.5 mm. A thin tungsten cathode 0.45 mm in diameter was placed in the critical section of the resonator, and the anode was the resonator itself, excited through a diaphragm. The emission current was varied by varying the filament current and the potential difference between the cathode and the resonator over a range at which there was no space charge. Experiments showed a linear connection between the relative tuning $\Delta\lambda/\lambda$ and the beam current I; the tuning range was 2%. An irregular cutoff resonator by an electron beam has a tuning range several times that of an ordinary resonator. Bibliography, 3 titles. O. N.

DATE ACQ: 03Mar64 SUB CODE: GE, SD ENCL: 00

Card 2/2

L 7020-65 EWT(1)/K/EEC(b)-2 IJP(c)/BSD/AFWL/AFETR/AEDC(a)/AS(mp)-2/ASD(a)-5/
SSD/ESD(t)/RAEM(t) GG
ACCESSION NR: AP4045285 S/0057/64/034/009/1709/1711

AUTHOR: Verkin, B. I.; Dmitrenko, I. M.; Dmitriyev, V. M.; Churilov, G. Ye.; Mende, F. F.

TITLE: Three-centimeter superconducting resonant cavity

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 34, no. 9, 1964, 1709-1711

TOPIC TAGS: resonant cavity, superconducting cavity, superconductivity, superconducting lead, lead, lead resonant cavity, microwave cavity, high Q cavity, particle accelerator

ABSTRACT: A superconducting resonant cavity operating in the E_{012} mode has been investigated as a high-Q element applicable to the process of interaction between charged particles and the electromagnetic field. The cylindrical cavity, 35 mm high and 45 mm in diameter, was fabricated by simple machining of technical grade C-0 brand lead. No special surface finishing was necessary. The coupling to the measuring circuit was designed to ensure the best approximation of the readings to the true internal Q-factor of the cavity. The latter, obtained by measuring the attenuation decrement, reached $5 \cdot 10^6$ at 4.2 K.

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ACCESSION NR: AP4045285

The authors anticipate the use of these simple devices as microwave frequency stabilizers, for precise measurements of ε and μ at helium temperatures, in resonance wavemeters, filters, frequency standards, etc., and in the construction of small and economical continuous-wave accelerators. Orig. art. has: 2 formulas and 1 figure.

ASSOCIATION: Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR Khar'kov (Physicotechnical Institute of Low Temperatures, AN UkrSSR)

SUBMITTED: 13Feb64 ATD PRESS: 3108 ENCL: 00

SUB CODE: EC, EM NO REF SOV: 004 OTHER: 002

Card 2/2

PUPKO, V. Ya.; MALYKH, V. A.; GUSAKOV, I. M.; PETROVSKIY, V. L.; DMITRIYEV, V. M.; YUR'YEV, Yu. S.

"Some problems in the development of a thermionic research converter."

report to be presented at Intl Conf on Thermionic Electrical Power Generation, London, 20-24 Sep 65.

USSR State Comn for Applications of Atomic Energy, Moscow.

L 24317-66 EWT(l)/EWT(m)/EPF(n)-2/EWG(m) WW

ACC NR: AT6006757 SOURCE CODE: UR/3158/65/000/021/0001/0017

AUTHOR: Pupko, V. Ya.; Malykh, V. A.; Gusakov, I. M.; Petrovskiy, V. G.; Dmitriyev, V. M.; Yur'yev, Yu. S.

ORG: Physics and Power Institute, State Committee on the Use of Atomic Energy SSSR (Fiziko-energeticheskiy institut, Gosudarstvenny komitet po ispol'zovaniyu atomnoy energii SSSR)

TITLE: Certain problems in the development of a thermionic emission reactor converter

SOURCE: Obninsk. Fiziko-energeticheskiy institut. Doklady, no. 27, 1965. Nekotoryye problemy razrabotki termoemissionnogo reaktora-preobrazovatelya, 1-17

TOPIC TAGS: thermoelectric convertor, neutron physics, nuclear reactor, volt ampere characteristic

ABSTRACT: This is a review article dealing with several neutron-physics and engineering problems connected with the development of a thermionic converter in which heat energy is converted into electricity by using an electron emitter in contact with the fissioning material of a nuclear reactor. The first section of the paper deals with possible neutron-physics characteristics of such reactors, such as the use of fast or slow neutrons in the reactor, the dependence of the U-235 charge and the volume of the active zone of thermionic reactors on the concentration of the uranium in the active zones for different thicknesses of the beryllium reflector and for different cathode materials, the distribution of the energy release over the active zone, the

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ACC NR: AT6006757

degree of burnup, the dimensions of the active zone, the critical reactor load, and the type and amount of moderator. The second section deals with thermodynamic and electrical engineering problems involved in such a converter, such as losses, thermal efficiency, conversion efficiency, volt-ampere characteristics, and methods of minimizing the losses. The third section presents the results of reactor tests of three-element assemblies of thermionic converters, made in the loop channel of the reactor of the first atomic electric stations of the SSSR. Tests were made on different fuel rods both under diffusion and arc-discharge conditions. For the particular reactor tested, the losses amounted to 12% of the theoretical output power for ohmic electrode resistance and commutation, 10% for heat leakage from the cathode, and 5% due to the axial inhomogeneity of the heat release in the assembly. This reduces the theoretical power rating of 2.7--3 w/cm^2 to a value of 2 w/cm^2. Orig. art. has: 8 figures.

SUB CODE: 10,20/ ORIG REF: 002/ OTH REF: 004

SUBM DATE: none

Card 2/2

LYAPUNOV, N.V.; DMITRIYEV, V.M.; SEDYKH, V.M.

Calculation of cutoff frequencies of H and π waveguides. Radiotekh. i elektron. 11 no. 2:345-346 F '66 (MIRA 19:2)

1. Submitted June 2, 1965.

ACC NR: AP7002555 (A,N) SOURCE CODE: UR/0413/66/000/023/0036/0036

INVENTOR: Mende, F.F.; Dmitriyev, V.M.; Khristenko, Ye.V.; Borodavko, Yu.M.

ORG: none

TITLE: Method of obtaining stable frequency from a nonstable uhf oscillator. Class 21, No. 189029 [announced by Physico-technical Institute of Low Temperatures, AN UkrSSR (Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 36

TOPIC TAGS: uhf oscillator, frequency stability, AMPLITUDE MODULATION

ABSTRACT:

To simplify the stabilization system used to obtain a highly stable frequency from a nonstable uhf oscillator which utilizes a superconductive resonator, it is proposed that the oscillator signal be amplified by an amplitude

Card 1/2 UDC: 621.373

ACC NR: AP7002555

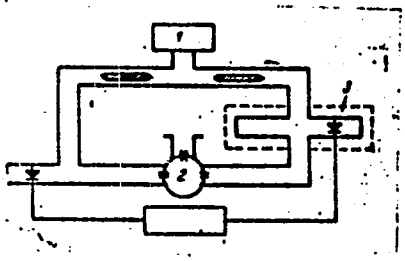

Fig. 1. Stabilization system

1 - Uhf oscillator; 2 - superconductive resonator; 3 - amplitude modulator.

modulator such as a waveguide twin T-joint with a detector, which is supplied with a difference signal of the oscillator carrier frequency and of the side frequency. The latter is obtained as a result of amplitude modulation of the oscillator carrier frequency and is separated with the help of the above-mentioned resonator. [JP]

SUB CODE: 09/ SUBM DATE: 20May65/ ATD PRESS: 5114

Card 2/2

DMITRIYEV, V.M.

LAPITSKIY, A.V.; NISHANOV, D.; DMITRIYEV, V.M.; KOZOREZOV, A.Z.

Ion exchange between certain potassium niobates and sodium tantalates. Zhur.neorg.khim. 2 no.4:952-958 Ap '57. (MLRA 10:8)

1.Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova. Kafedra neorganicheskoy khimii.
(Ion exchange) (Potassium niobates)
(Sodium tantalate)

DMITRIYEV, V.M.

DMITRIYEV, V.M.

Machine tools used in lapping measuring surfaces of sliding caliper jaws. Stan.i instr. 29 no.1:18-20 Ja '58. (MIRA 11:1)
(Grinding machines) (Calipers)

KAGAN, Vera Zinov'yevna; VINOGRADOV, N.V., doktor ekon. nauk, prof., retsenzent; DMITRIYEV, V.M., inzh., ekon., retsenzent; FUKS, V.K., red.; SATAROVA, A.M., tekhn. red.

[Economics and planning in the starch and mollases industry] Ekonomika i planirovanie krakhmalo-patochnoi promyshlennosti. Moskva, Pishchepromizdat, 1963. 277 p. (MIRA 16:7)
(Starch industry)

21 (7)

AUTHORS: Dmitriyev, V. N., Drapchinskiy, L. V., Petrzhak, K. A., Romanov, Yu. F.

SOV/20-127-3-14/71

TITLE: Energy Distribution of the Fragments From a Triple Fission of Uranium Nuclei Under the Action of Neutrons

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 3, pp 531 - 533 (USSR)

ABSTRACT: In the fission of the U^{235} nucleus by slow neutrons a far-reaching α-particle forms (Refs 1-4) besides two fragments with comparable mass. Allen and Dewan (Ref 2) used a double ionization chamber with target for investigating the energy distribution mentioned in the title. The chamber for recording the fission fragments had a grid, the other, used for recording the far-reaching α-particles, was separated from the target by a foil. The amplitude distribution of the fragment momenta of a triple fission was determined by means of a 30-channel amplitude analyzer. The energy distribution of the fragments originating from triple- and a double fission of U^{235} according to data from Allen and Dewan are shown by figure 1. In the present paper more exact investigations of the energy

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distribution of a triple fission were carried out. The influence exercised by the angular correlation was excluded by using a cylinder-symmetric grid which was fixed symmetrically to the plane of the central electrode. On the central electrode the uranium target was fastened onto a silver layer. The effective solid angle of the α-chamber amounted to 12.5% of 4π. The target was irradiated by neutrons of the reactor spectrum from the physical reactor of the AS USSR. The spectrum of the pulse amplitudes was recorded on a 30-channel pulse analyzer with electron brain. The simultaneously arriving pulses of α-particles and fragments were counted. The ionization in the fission chamber was taken into account. From the results obtained (Fig 1) the following was found: The spectra of fission into two and into three fragments are of analogous shape. With respect to fission into two fragments there is a shift of peaks toward the range of lower energies. Shifting of the peaks of the light fragments is greater than that of heavy fragments. Thus, there is such a thing as a slight approach of peaks. The ratio of peak heights is 1.1 compared to 1.48 in the double

fission of U^{235}. Likewise, the half width of the peak of heavy fragments is smaller in the case of triple fission. On the other side of the central electrode in the chamber, peaks are further shifted because of the slowing-down of the fragments in the film- and silver layer upon which the U^{235} was applied. Figure 2 shows the energy distribution for the double and triple fission of U^{233}. The fundamental parameters of this distribution are analogous to that of U^{235}. The sum of kinetic energy by which the two peaks (of light and heavy fragments) are shifted with respect to double fission is 17 Mev, which about corresponds to the 15 Mev required for the departure of α-particles. There are 2 figures and 5 references, 2 of which are Soviet.

Energy Distribution of the Fragments From a Triple Fission of Uranium Nuclei Under the Action of Neutrons SOV/20-127-3-14/71

ASSOCIATION: Radiyevyy institut im. V. G. Khlopina Akademii nauk SSSR (Radium Institute imeni V. G. Khlopin of the Academy of Sciences, USSR)

PRESENTED: April 8, 1959, by A. I. Ioffe, Academician

SUBMITTED: April 2, 1959

Card 4/4

83760

S/056/60/039/003/005/045
B004/B060

24.6600 (1138)

AUTHORS: Dmitriyev, V. N., Drapchinskiy, L. V., Petrzhak, K. A., Romanov, Yu. F.

TITLE: Energy Distribution of Fragments of Triple Fission of U^{235} 19

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 3 (9), pp. 556-562

TEXT: The authors wanted to obtain more accurate data regarding the energy distribution mentioned in the title by recording the energy of pair fragments. The alpha particles on either side of the target of the fissile substance were recorded in order to exclude the effect of angular correlation of fragments and alpha particles. Fig. 1 shows the arrangement of electrodes in the triple ionization chamber. The latter was filled with argon, whose 2 atm pressure prevented the alpha particles of the natural uranium radioactivity from penetrating into the chamber. Long-range alpha particles with energies from 10 to 24 Mev were recorded in the chamber. The target of the fissile substance was applied

Card 1/4

Energy Distribution of Fragments of Triple Fission of U^{235}

S/056/60/039/003/005/045
B004/B060

onto the common electrode of the fission chambers. The U^{235} was sprinkled onto one side of a gold-coated polyvinyl chloride acetate film in the electrostatic field. The U^{235} layer applied was 10 microgram/cm^2 thick. Fig. 2 shows the block diagram of the electronics the operation of which is described. The experiments were made on the physical reactor belonging to the AS USSR. 8000 triple fission events and 6000 double fission events were recorded. Fig. 3 shows the spectra relating to the fragments of triple and double fission taking account of the ionization caused by long-range alpha particles. The peak of light fragments is shifted in the direction of low energies by (9.0±0.5) Mev in the case of triple fission, while the peak of heavy fragments is shifted by (6.0±0.5) Mev. Fig. 4 shows the fragment yield in triple and double fission as a function of the total energy of fragments. The difference between the most probable energies amounts to (15.0±0.5) Mev. The half-width of distribution of triple fission fragments is 3 Mev smaller than in the case of double fission. The distribution approaches the form of a Gaussian. The fragment yield was determined as a function of the mass ratio on the strength of experimental data (Fig. 5). Fig. 6 shows the most probable

energies and dispersions of the kinetic total energy of fragments as a function of the mass ratio. The peaks observed in the range of mass ratio 1.3 are explained by the effect of the shell structure in accordance with A. N. Protopopov and I. A. Baranov (Ref. 10). The authors arrive at the conclusion that the probability of triple and double fission is not dependent on the mass ratio. The relation $E_{db} = E_{tr} + E_{\alpha}$ (1) holds, where E_{db}, E_{tr} denote the kinetic total energy of double and triple fission fragments and E_{α} the energy of alpha particles. The following relations are written down for the most probable event: $E_{db} = 166.4$ Mev, $E_{tr} + E_{\alpha} = 151.4 + 14.8 = 166.2$ Mev. The half-width values ΔE_{db}, ΔE_{tr}, ΔE_{α} obey equation $(\Delta E_{db})^2 = (\Delta E_{tr})^2 + (\Delta E_{\alpha})^2$, and are in agreement with experimental data. An explanation is supplied for the mechanism of triple fission. The authors mention papers by N. A. Perfilov, Yu. F. Romanov, and Z. T. Solov'yeva (Ref. 1), and V. T. Mostovoy et al. (Ref. 4). They thank M. A. Bak and S. S. Kovalenko for their advice and discussions, S. A.

83760

Energy Distribution of Fragments of Triple Fission of U^{235}

S/056/60/039/003/005/045
B004/B060

Gavrilov and A. P. Shilov for their cooperation in experiments made on the physical reactor of the AS USSR. There are 6 figures and 18 references: 9 Soviet, 6 US, 1 British, 1 Canadian, and 1 French.

ASSOCIATION: Radiyevyy institut Akademii nauk SSSR (Radium Institute of the Academy of Sciences, USSR)

SUBMITTED: April 14, 1960

Card 4/4

DMITRIYEV, V.N.; IRAPCHINSKIY, L.V.; PETRZHAK, K.A.; ROMANOV, Yu.F.

Comparing the probabilities of triple fission of U^{233}, U^{235} and Pu^{239}. Zhur.eksp.i teor.fiz. 38 no.3:998-999 Mr '60. (MIRA 13:7)

1. Radiyevyy institut Akademii nauk SSSR.
(Nuclear fission) (Uranium--Isotopes)
(Plutonium--Isotopes)

S/120/60/000/004/020/028
E032/E414

AUTHORS: Dmitriyev, V.N., Drapchinskiy, L.V. and Romanov, Yu.F.

TITLE: Teflon Insulators for Ionization Chambers and Counters

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No.4, p.135

TEXT: High voltage insulators are of considerable importance in ionization chamber practice. Glass or porcelain insulators which are available commercially are frequently inconvenient either because of their electrical or mechanical properties or their large dimensions. During the last three years, the present authors have used teflon insulators with dimensions not exceeding 40 x 10 mm^2. Such insulators are capable of withstanding voltages in excess of 10 kV. One of the simplest designs for such insulators is shown in Fig.1, where 1 is the insulator, 2 is a nut which keeps the insulator in position, 3 is a bush with a circular step, 4 is a soldered joint, 5 is the body of the chamber and 6 is a screw and nut arrangement. This design is vacuum-tight and can withstand pressures between a few mm Hg and 4 atm. There is 1 figure.

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S/120/60/000/004/020/028
E032/E414

Teflon Insulators for Ionization Chambers and Counters

ASSOCIATION: Radiyevyy institut AN SSSR
(Radium Institute AS USSR)

SUBMITTED: June 11, 1959

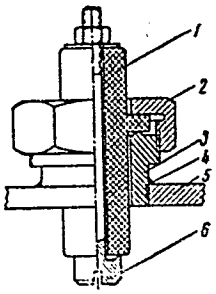

Рис. 1. Конструкция фторопластового изолятора. *1* — изолятор, *2* — гайка для крепления изолятора, *3* — втулка с кольцевым выступом, *4* — место пайки, *5* — корпус камеры, *6* — фигурный винт с гайкой

Fig.1.

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S/120/62/000/001/020/061
E140/E463

21.6000

AUTHORS: Dmitriyev, V.N., Drapchinskiy, L.V., Petrzhak, K.A., Romanov, Yu.F.

TITLE: Measurement of conjugate fission fragment energies

PERIODICAL: Pribory i tekhnika eksperimenta, no.1, 1962, 94-96

TEXT: In studying energy evolution in the fission of heavy nuclei, the energies of the fission fragments must be measured. The authors use a method of photographic recording from the screen of a CRT, where the two axes correspond to the energies of two conjugate fission fragments. Up to 80 events are photographed on one frame, from which they are transferred to millimetric paper manually (using a projection technique). Ten thousand points can be plotted in 8 man hours. A control experiment was run to test the symmetry of the two channels, which was found satisfactory to within experimental error. There are 2 figures.

ASSOCIATION: Radiyevyy institut AN SSSR
(Radium Institute AS USSR)

SUBMITTED: June 7, 1961

Card 1/1

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410520014-4"

L 11137-63 EPF(n)-2/EWT(m)/BDS--AFFTC/ASD/SSD--Pu-4--DM
ACCESSION NR: AP3002264 S/0089/63/014/006/0574/0575

AUTHOR: Dmitriyev, V. N.; Drapchinskiy, L. V.; Petrzhak, K. A.; Romanov, Yu. F.

TITLE: Comparative characteristics of triple fission of uranium and plutonium

SOURCE: Atomnaya energiya, v. 14, no. 6, 1963, 574-575

TOPIC TAGS: triple fission, uranium, plutonium

ABSTRACT: The purpose of the work was obtaining sufficient data concerning the energy distribution of fission fragments of U sup 238, U sup 235, and Pu sup 239 by slow neutrons. Twenty thousand events of triple fission of the first, 15,000 events of the second, and 12,000 of the third nucleus were recorded. The apparatus used was described in Zhurn. eksper. i teoret. fiz., v. 39, 1960, 556. The data are plotted with E sub 1/E sub 2 as abscissa, E sub 1 + E sub 2 as ordinate, for each value of the relative frequency of fission; thus, the "contour diagram" is obtained. The diagrams are similar for all three nuclei. Figure 1 (see Enclosures) shows the results for U sup 238. The solid lines are for triple fission, and the broken lines are for double fission. Discussion of the result is presented. The latter indicate the same nature of fissions in all three nuclei. Orig. art. has: 2 figures and 1 table.

Card 1/4

L 14938-63 EWT(m)/BDS AFFTC/ASD DM

ACCESSION NR: AP3003968 S/0089/63/015/001/0006/0011

AUTHORS: Dmitriyev, V. N.; Petrzhak, K. A.; Romanov, Yu. F.

TITLE: Kinetic energy of fragments and Alpha-particle in triple fission of U sup 235

SOURCE: Atomnaya energiya, v. 15, no. 1, 1963, 6-11

TOPIC TAGS: triple fission, U sup 235, energy of fission fragments

ABSTRACT: The connection between the kinetic energy of fragments and the energy of the long-range Alpha particles in a triple fission is essential in the theory of the latter. In the present work, the authors measured the energy distribution of the fragments of triple fission, the average energy of Alpha particles being 10.6, 16.4, 20.3, and 24.0 mev. It was found that the total average energy of the fragments does not depend on the Alpha particle energy when the latter is greater than 15 mev; it does depend on it for less energetic Alphas. The work was performed by using the reactor of the Leningrad Physico-Technical Institute, AN SSSR. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 23Aug63 DATE ACQ: 08Aug63 ENCL: 00

SUB CODE: PH NO REF SOV: 001 OTHER: 001

Card 1/1

L 25968-66 EWT(m) DIAAP

ACC NR: AP5026438 SOURCE CODE: UR/0089/65/019/004/0342/0346

AUTHOR: Blinov, V. A.; Dmitriyev, V. N.; Kuznetsov, M. I.

ORG: None

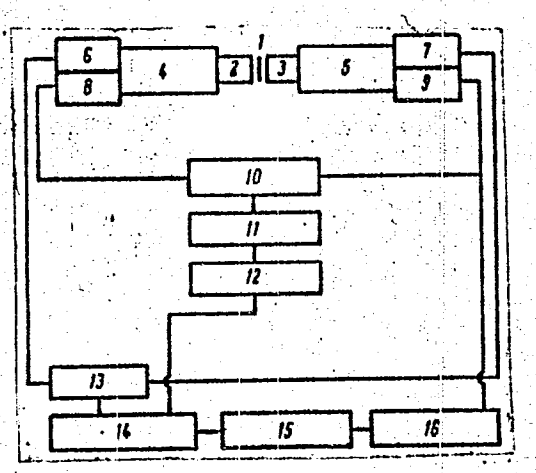
TITLE: Application of the gamma-ray spectrometer of a sum-coincidence type to the analysis of radioisotope mixtures

SOURCE: Atomnaya énergiya, v. 19, no. 4, 1965, 342-346

TOPIC TAGS: gamma detection, gamma spectrometer, radioisotope, radiation measurement, gamma radiation, scintillation spectrometer, gamma ray absorption

ABSTRACT: In reviewing various methods and devices used for detection and measurement of gamma radiations, the authors chose for their experiments, the method developed by A. M. Hoogenboom (Nucl. Instrum. 3, 57, 1958). In this method, a two-crystal scintillation spectrometer was used to measure the gamma radiation emitted in cascade disintegrations. This method with improved resolution was especially suited to measure gamma coincidence spectra as well as to sum up relevant peaks. The authors adapted this method with some modifications to the analysis of radioisotope mixtures. In their arrangement (see Fig. 1 - Card 2/3) a system of fast-slow coincidences was employed. The resolving time for fast coincidences could be changed between 0,5x10-9 and 5x10-8 sec. A

Card 1/3 UDC: 539.107



1-Sample
2 and 3 - Crystals NAI(Tl)
4 and 5 - FEU photomultipliers
6 and 7 - Pulse shapers
8 and 9 - Cathode followers
10 - Linear summator
11 - Amplifier
12 - Differential discriminator
13 - Fast coincidence device
14 - Slow coincidence device
15 - Analyzer of Al-100 type
16 - Delay line

Fig. 1

Gamma-ray spectrometer of sum-coincidence type

L 25968-66

ACC NR: AP5026438 O

multi-channel analysing device checked only coinciding pulses, the sum of which represented the full energy emitted by two cascading gamma quanta. Only the full gamma absorption peaks were checked. The effect of Compton scattering was eliminated. The results of experiments are illustrated by six graphs showing the spectra obtained for Co-60, Mo-99, Ru-106, and Ce-144 isotopes. In order to reduce the back-scattering effect, the crystals are protected by lead cones. It is mentioned, however, that the lead protection could be ommitted in cases where weak samples were used. In conclusion, it is stated that this method can be applied to measurements of Ce-143, Ce-144, Mo-99, I-131, I-132, Ru-160, Ba-140, Co-60, U-235 and all other isotopes having a cascading gamma radiation. This quantative analysis can be used also for isotope disintegrations caused by the successive emissions of one electron and one gamma ray. Finally, it is also stressed, that this method could serve as a reliable tool for determining the contents of isotopes having a gamma radiation of 3 to 4 pct. of the total amount of gamma rays emitted by the mixture. Orig. art. has: 2 diagrams, 4 graphs.

SUB CODE: 04,18/ SUBM DATE: 10Oct65 / ORIG REF: 003 / OTH REF: 007

Card 3/3 FW

L 21933-66 EWT(1)/EWT(m)/FCC DIAAP GW

ACC NR: AP6014487 SOURCE CODE: UR/0089/65/019/005/0472/0474

AUTHOR: Gedeonov, L. I.; Dmitriyev, V. N.; Nelepo, B. A.; Stepanov, A. V.; Yakovleva, G. V. 40 36 B

ORG: none

TITLE: Radioactivity of the air over the Atlantic Ocean in May to July, 1964

SOURCE: Atomnaya energiya, v. 19, no. 5, 1965, 472-474

TOPIC TAGS: atmospheric radioactivity, radioactive fallout, research ship, radioactive aerosol

ABSTRACT: The radioactivity of the air and the fallout over the Atlantic Ocean were studied during the 15th cruise of the research ship Mikhail Lomonosov. The samples were collected by filtering the air and allowing the fallout to deposit on a sticky surface. The samples collected south of 8° latitude south, north of 8° latitude north, and between 8° latitude south and 8° latitude north were determined jointly. Comparison of the results with those obtained during the 12th cruise of the ship, at the end of 1962, revealed that, because nuclear testing in the atmosphere was stopped the specific activity of the aerosols in the lower layer of the atmosphere decreased by about an order of magnitude. Within 38 and 5° latitudes north, the concentration of the aerosols was practically independent of the place of collection, due to the mixing of the atmosphere by the trade winds. No direct correlation could be established between the concentration of radioactive aerosols and the fallout

Card 1/2

UDC: 551.594.1:541.182.2

L 21933-66

ACC NR: AP6014487

4

rate, on one hand, and the average daily values of the atmospheric pressure, and temperature, on the other hand. The high fallout rate in the equatorial region was due to the heavy prevailing rainfall. The aerosol concentration was much lower in the equatorial region and the southern hemisphere than in the northern hemisphere. Averaged data of previous cruises indicated that the highest fission product concentrations are distributed between 14 and 40° latitude north; the activity of the air in the southern hemisphere amounted to only 10% of that in the northern hemisphere. The authors thank V. M. Vdovenko and A. G. Kolesnikov for making possible the completion of this work. Further thanks is rendered I. N. Maksimov and L. N. Sysoyevaya for their assistance in processing the results of the research. Orig. art. has: 4 figures and 1 table. [NA]

SUB CODE: 18, 04 / SUBM DATE: 01Mar65 / ORIG REF: 003

Card 2/2 nst

DMITRIYEV, V. N.

DMITRIYEV, V. N. - "Experimental and Theoretical Investigation of a Pneumatic Relay of the 'nozzle-gate' Type." Acad Sci USSR. Inst of Automatics and Telemechanics. Moscow, 1955. (Dissertation for the Degree of Candidate in Technical Sciences)

So; Knizhnaya Letopis' No 3, 1956

112-57-8-16984

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1957, Nr 8, p 147 (USSR)

AUTHOR: Dmitriyev, V. N.

TITLE: Experimental Investigation of Throttling Units of a Nozzle-and-Shutter Pneumatic Relay (Eksperimental'noye issledovaniye drosseliruyushchikh organov pnevmaticheskogo rele tipa soplo-zaslonka)

PERIODICAL: Sb. rabot po avtomatike i telemakhan. (Collection of works in Automation and Telemechanics), Moscow, AS USSR, 1956, pp 105-126

ABSTRACT: Material on the rate-of-flow factor of constant and variable throttles for undercritical gas flow conditions is presented. Experimental data are given in terms of the similarity of Re and N for constant throttles, or jets, for capillaries, and for variable throttles, such as nozzle-and-shutter, nozzle-ball, and conical throttles. An experimental outfit and methods of determining the rate-of-flow factor μ for the above throttles are described. For jets with a hole diameter d = 0.37 to 2.406 mm and with a channel

Card 1/3

Experimental Investigation of Throttling Units

length L = 0.4 to 1.45 mm (ratio L/d = 0.4 to 1.707), the μ factor is independent of Re and the diameter d. The value of $\mu \cong 0.8$. For capillaries having d = 0.18 mm, the minimum length for which Re does not exceed 2,400 (laminar outflow boundary), is .39 mm, i.e., L/d $\approx$ 200. For nozzle-and-shutter type throttles, the factor is determined for gaps up to h = 1/4 d. The lateral surface of cylinder $F = \pi dh$ is assumed to be the cross-sectional area of the passage. The μ factor depends on the value of Re, and on the ratio of barometric pressure to the pressure before the throttle p_1/p_o. This factor slightly depends on the ratio D/d (nozzle-end and port diameters). The working range of the nozzle-and-shutter type throttles is Re = 40 to 400. General shape of the curves $\mu/Re = f(Re)$ and $\mu = f(Re)$ for various values of p_o/p_1 also holds true for nozzle-ball throttles. The working range for these throttles is 17 to 1100 Re. For the conical throttle, the relationship between and p_1/p_o for several needle positions are given. To facilitate finding μ with Re known, additional curves of $\mu/Re = f(Re)$ are presented, as well as formulae for determining μ/Re. For capillaries and nozzle-and-shutter throttles, curves are presented which permit determination of μ with a known

Card 2/3

112-57-8-16984

Experimental Investigation of Throttling Units

gap h and ratio p_o/p_1 for two cases: when p_1 = 1 atm and p_o = 2.1 atm (fixed value of p_1 and p_o are given). It is pointed out that, for the same p_o/p_1, the factor μ also depends on absolute values of p_o and p_1. The above data permit calculating static characteristics of throttling organs of a pneumatic relay. There are 15 illustrations. Bibliography: 3 items.

M. L. P.

Card 3/3

DMITRIYEV, V.N. (Moskva); SHASHKOV, A.G. (Moskva)

Force effect of an air jet on a flapper in pneumatic and hydraulic control devices of the "nozzle-flapper" type. Avtom. i. telem. 17 no.6:559-569 Je '56. (MLRA 9:10)

(Pneumatic control) (Nozzles) (Air jets)

DMITRIYEV, V.N.

Calculating the static characteristics of pneumatic relays [with English summary in insert]. Avtom.i telem. 17 no.9:761-774 S '56. (MLRA 9:11)

(Pneumatic control)

DMITRIYEV, V. N.

BEREZOVETS, G.T.; DMITRIYEV, V.N.; NADZHAFOV, E.M.,

Allowable simplifications in designing pneumatic control devices.
Priborostroenie no.4:11-18 Ap '57. (MLRA 10:5)
(Pneumatic control)

DMITRIYEV, V.N.

103-8-1/8

AUTHOR DMITRIYEV, V.N. (Moscow)

TITLE Improvement of a Static Characteristic of a Pneumatic Relay by Using a Pneumatic Device with Constant Pressure Differentials (Uluchsheniye staticheskoy kharakteristiki pnevmaticheskogo rele primeneniyem drosseley postoyannogo perepada. Russian)

PERIODICAL Avtomatika i Telemekhanika, 1957, Vol 18, Nr 8, pp 689 - 701 (U.S.S.R.)

ABSTRACT Here is investigated the theory of relays with constant pressure differential on a constant pneumatic device, with constant pressure differential on an alternating pneumatic device, and with constant pressure differential on a constant and an alternating pneumatic device. Conclusions are drawn concerning the influence of the construction and working parameters on the static characteristic. Data of the experimental investigation are given which confirm the theoretical conclusions. The following may be summarized: 1.) The maintenance of a constant pressure differential on a constant pneumatic device markedly increase the gradient of the working scope of the static characteristic of the relay. An increase in the constant pressure differential on the constant pneumatic device shifts the working scope to the right. The gradient is reduced. 2.) The maintenance of the constant pressure differential on the alternating pneumatic device shifts the static characteristic of the relay into the zone of higher pressure in the intermediate chamber of the pneumatic device. The production of a constant pressure differential on the alter-

Card 1/2

Improvement of a Static Characteristic of a Pneumatic Relay by Using a Pneumatic Device with Constant Pressure Differentials

nating pneumatic device alone does not bring about any marked improvement of the static characteristic. 3.) Joint production of a constant differential on the constant and on the alternating device considerably increases the slope of the working scope of the static characteristic, its linearity and also shifts the scope preceding the working scope into the zone of higher pressure in the intermediate chamber of the pneumatic device. Increased constant pressure differential on the constant pneumatic device influences the static characteristic in the same manner as in the case of relay which has constant differential only on the constant pneumatic device. Reduced constant differential on the alternating pneumatic device increases the slope of the working scope and shifts it to the right. (10 illustrations, 9 tables, 5 Slavic references).

ASSOCIATION Not given
PRESENTED BY
SUBMITTED 8.1.1957
AVAILABLE Library of Congress

DMITRIYEV, V. N. (IAT AN SSSR)

"Results from the Investigation of Relays with an Element of the Nozzle-flap Type."

report presented at the Scientific Seminar on Pneumo-Hydraulic Automation, 28-29 May 1957, at the Inst. for Automation and Remote Control (IAT), Acad. Sci. USSR

Avtomatika i K Telemekhanika, 1957, Vol. 18, No. 12, pp. 1148-1150, (author SEMIKOVA, A. I)

AUTHORS: Dmitriyev, V.N., Nadzhafov, E.M. SOV/ 119-58-7-4/10

TITLE: The Movable Pneumatic Piston Drive of an Aggregate Unified System (AUS) (Peredvizhnoy sledyashchiy pnevmoprivod agregatnoy unifitsirovannoy sistemy (AUS))

PERIODICAL: Priborostroyeniye, 1958, Nr 7, pp. 15-19 (USSR)

ABSTRACT: The pneumatic piston drive (PSP) (developed at the Institut avtomatiki i telemekhaniki AN SSSR (Institute of Automatics and Telemechanics AS USSR)) was constructed on the basis of the following points of view:

1.) The connected value of pressure for the organs to be controlled must be within the range of from 0.2 to 1 kg/cm^2.
2.) Feeding is accomplished by pressure lines with a maximum working pressure of 4 kg/cm^2.
3.) Accuracy: 1%
4.) Operating speed should not be less than 50 mm/sec, and transmission width should not be less than 3 cycles.
5.) The insensibility range in input pressure should be below 0.008 kg/cm^2.
6.) No levers are allowed to be used for coupling.

Card 1/2

The Movable Pneumatic Piston Drive of an Aggregate SOV/ 119-58-7-4/10

Only the control- and distributing mechanisms the piston, and the cylinder are described in detail.
The experimental investigation of the apparatus for the determination of static and dynamic behavior was carried out with the following values: Feed pressure 2-4 atm excess pressure, input pressure 0.2-1.0 atm excess pressure, diameter of piston 150 mm, maximum stress brought to bear on the piston 700 kg, total piston path 280 mm.
In the course of the static test the amplification coefficient was measured as amounting to 29.4 mm/atm excess pressure. The average insensitiveness does not exceed 0.005 atm excess pressure. The following values were measured in the course of the dynamic test: Maximum velocity of the piston 83 mm/sec. Resonance frequency: approximately f = 0.7 to 0.8 cycles. As an additional device a braking mechanism and a transducer are described in short. There are 9 figures.

1. Pistons---Performance 2. Cylinders---Performance 3. Control systems---Performance

Card 2/2

28(1)

AUTHORS: ~~Dmitriyev, V. N.~~, Chernyshev, V. I. SOV/103-19-12-4/9
(Moscow)

TITLE: Calculation of the Time Characteristics of Pneumatic Flow Chambers (Raschet vremennykh kharakteristik protochnykh pnevmaticheskikh kamer)

PERIODICAL: Avtomatika i telemekhanika, 1958, Vol 19, Nr 12, pp 1118 - 1125 (USSR)

ABSTRACT: Firstly four differential equations for the variation of the pressure P_1^* (of the air in the chamber between the throttles) are deduced, which are related to varying combinations of flow regimen. The equations obtained (which incorporate the condition of the jump-like variation of an arbitrary initial quantity (P_0 feed pressure of the chamber, f_1 effective cross-section of the first throttle, f_2 that of the second throttle, P_2 air pressure after the second throttle)) are of first order and can be solved by separating the variables. These differential equations are then integrated under the

Card 1/2

assumption that the transmittance coefficients μ_i remain constant during the transient process. Two diagrams are presented and described. 1) With the first the parameters of the initial steady flow regimen, the combination of the flow regimens of the first and second throttle during the transient process and the combination of flow regimens for a new stabilized value of the variable parameter can be determined. 2) The second diagram illustrates the dependence of the transmittance coefficient μ_i upon the distance h between nozzle and diaphragm, and upon the pressure P_{i-1} ahead of the throttle for a throttle of a nozzle-diaphragm type. μ_i was obtained experimentally (Ref 4). Finally four sample problems are presented for the calculation of the time characteristics, the results of which are compared to those obtained experimentally.

There are 5 figures, 3 tables, and 4 Soviet references.

SUBMITTED: January 13, 1958

DMITRIYEV, V. N.

28(1) PHASE I BOOK EXPLOITATION SOV/2702

Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.
Seminar po pnevmogidravlicheskoy avtomatike. 1st, Moscow, 1957

Sintezy, raschety i elementy pnevmo- i gidravtomatiki; [Journal]
(Pneumatic and Hydraulic Circuits, Devices, and Elements in
Automation; Collection of Papers/) Moscow, Izd-vo AN SSSR,
1959. 233 p. Errata slip inserted. 2,700 copies printed.

Resp. Ed.: M. A. Aizerman, Doctor of Technical Sciences, Professor;
Ed. of Publishing House: A. A. Tal'; Tech. Ed.: T. P. Polyakova.

PURPOSE: This collection of papers is intended for scientific research workers and engineers in the field of design and construction of pneumatic and hydraulic equipment and accessories for automation.

COVERAGE: This collection contains papers read at the Seminar on Pneumatic and Hydraulic Devices for Automation, May 28, 1957. The collection is divided into the following three groups: 1) newly developed pneumatic and hydraulic circuits; 2) pneumatic and hydraulic devices, including regulating units, transmitters and transducers, actuating mechanisms, special-purpose devices, and auxiliary equipment and 3) elements of pneumatic and hydraulic devices for automation, such as controlled and permanent nozzles and diaphragms. No personalities are mentioned. References follow several of the papers.

88518

S/103/61/022/001/010/012
B019/B056

9.7200

AUTHORS: Berezovets, G. T., Dmitriyev, V. N., Tal', A. A. (Moscow)

TITLE: A New System for Pneumatic Computers. I

PERIODICAL: Avtomatika i telemekhanika, 1961, Vol. 22, No. 1, pp. 111-118

TEXT: The authors studied methods of designing pneumatic analog computers, in which pneumatic amplifiers are used, which operate at pressures of from 0 - 100 mm water column, an idea originated by the German engineer V. Ferner. The first part deals with carrying out linear algebraic operations by means of such a computer. The development of exact pneumatic computers is, in general, rendered difficult by the fact that within the usual pressure range of from 0 - 1 atm excess pressure between input and output pressure, the throttling characteristics are not linear. Two new principles for avoiding these difficulties are given. The first principle is the construction of the pneumoautomatic of all control and computing devices on the basis of a standard element, the operational amplifier. This offers special constructional advantages. The second new principle is the use of pressures between 0 - 100 mm water column. This

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low pressure causes no deterioration of the dynamic characteristic of the devices, it is possible to produce linear throttles, and the air consumption is considerably lower. The system of pneumatic computers described here consists of standardized elements, which may be divided into two groups. The first group consists of the pneumatic computer proper, and the second of the throttles and similar elements. Fig.1 shows the basic scheme of a pneumatic computing device, its entire view, the static characteristic, and the principal circuit. In the entire system, three types of throttles are used: 1) Constant linear (laminar) throttles. 2) Constant quadratic (turbulent) throttles. 3) Linear control throttles. In order to be able to carry out any linear algebraic operations with pneumatic devices, it is necessary to be able to represent functions of the form $P = \sum_{i=1}^{n} k_i P_i \quad (-\infty < k_i < +\infty)$ (2) by means of general methods. Here, P_i are pneumatic input signals and P the output pressure. In the following, three methods for solving this problem are dealt with in detail. 1) Fig.2 shows the scheme of a non-compensating throttle summator. The above considerations show a limited applicability

of such a summator. 2) Fig.3 shows a compensating throttle summator, by means of which any arbitrary algebraic function may be represented. Fig.4 shows a scheme by means of which any arbitrary algebraic operation may be carried out, and which exists of two throttle summators shown in Fig.3. 3) Fig.6 shows a second type of a compensating throttle summator, which differs from the first type by the fact that the chamber of the computing amplifier of a non-compensating throttle summator is connected with m inputs. A study of this summator shows that, unlike the previously studied ones, every algebraic operation may be carried out with only one computing amplifier. The second part will deal with the construction of integrators and differentiators and with devices for carrying out non-linear operations. There are 9 figures and 7 Soviet references.

SUBMITTED: July 24, 1960

Legend to Fig.1: 1) Body, 2) membrane block; M) membranes, 3) nozzle, 3) ejector throttle.

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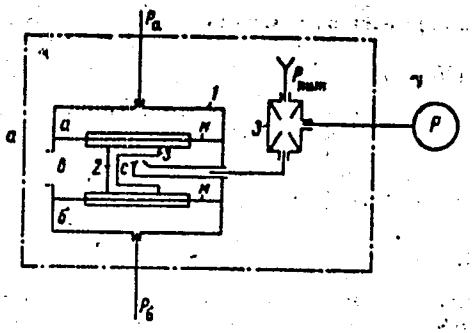

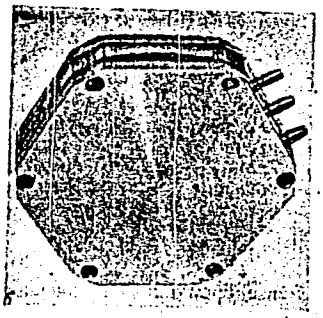

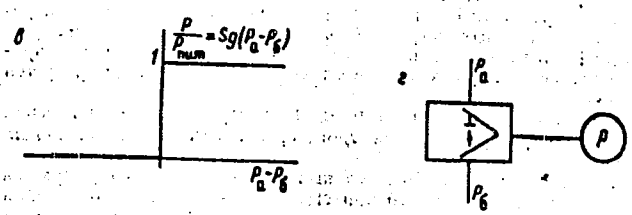

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Рис. 1 (Fig. 1)

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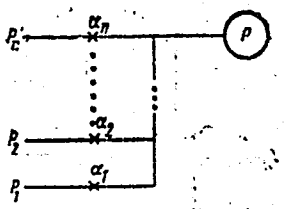

Рис. 2 (Fig. 2)

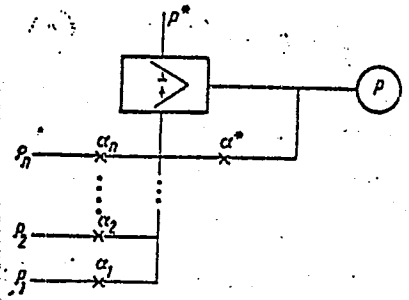

Рис. 3 (Fig. 3)

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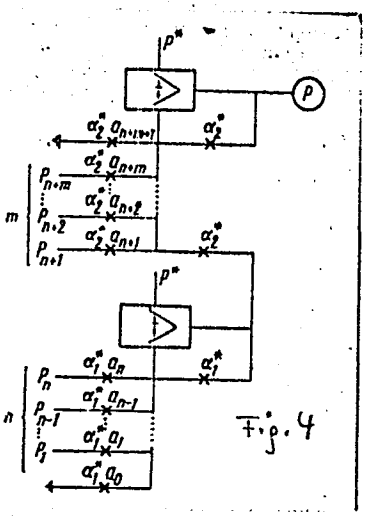

Fig. 4

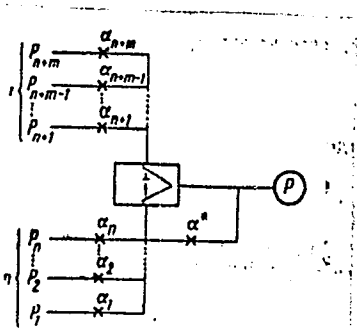

Рис. 6 (Fig. 6)

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DMITRIYEV Vadim Nikolayevich; CHERNYSHEV, Vladimir Ivanovich; CHERVYAKOVSKIY, A.TS., red.; BORUNOV, N.I., tekhn. red.

[Pneumatic analog computers] Pnevmaticheskie vychislitel'nye pribory nepreryvnogo deistviia. Moskva, Gosenergoizdat, 1962. 95 p. (Biblioteka po avtomatike, no.52) (MIRA 15:6)
(Calculating machines) (Pneumatic control)

L 6736-65 EWT(d) Pg-4/Pk-4/Pl-4/Pe-4/Pq-4 AFWL/ESD(gs)/ESD(dp)/AUL(c)

ACCESSION NR: AP4044182 S/0119/64/000/008/0015/0016

AUTHOR: Dmitriyev, V. N. (Candidate of technical sciences); Tenenbaum, I. A. (Engineer)

TITLE: New pneumatic ball-type and diaphragm-ball-type continuous devices

SOURCE: Priborostroyeniye, no. 8, 1964, 15-16

TOPIC TAGS: pneumatic device, pneumatic adder, pneumatic pressure reducer, pneumatic pressure amplifier, electropneumatic transducer

ABSTRACT: A few pneumatic devices are briefly described in which conventional diaphragms are totally or partially replaced by small balls rolling in channels with a clearance of 0.002—0.012 mm. A ball-type negative-feedback adder uses 4-mm bearing-type steel balls, consumes 0.5 kg/hr of air, and has an error under 0.7%. A pressure converter reduces pressure from 0—1 atm to 0—100 mm water, consuming 2.1 nl/min and having an error of ± 0.5%. Another

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L 6736-65
ACCESSION NR: AP4044182

converter can be used as a pressure amplifier; it consumes 3.2 nl/min; its error is ±0.5%. Both converters use 3-mm stainless-steel balls. An electro-pneumatic negative-feedback transducer comprises an RP-4 polarized relay, a nozzle-flapper device, an operational amplifier, and a ball-type power component; its error, ±1.5%. These advantages are claimed: (a) simple design and small size; (b) constant effective area of ball components within 0—1 kg/cm²; (c) higher speed of operation; (d) tolerance to ambient temperature. These disadvantages are mentioned: (a) loss of signal power; (b) tendency to hunt. "Dynamic tests of the adders were performed by M. M. Volobrinskiy." Orig. art. has: 8 figures and 2 formulas.

ASSOCIATION: Institut avtomatiki i telemekhaniki AN SSSR (Institute of Automation and Telemechanics, AN SSSR)

SUBMITTED: 00 ENCL: 00

SUB CODE: IE NO REF SOV: 000 OTHER: 000

Card 2/2

ACC NR: AP7002596 (A,N) SOURCE CODE: UR/0413/66/000/023/0102/0102

INVENTOR: Soms, M.K.; Krishtul, I.B.; Polyakov, V.I.; Dmitriyev, V.N.; Gradetskiy, V.G.

ORG: none

TITLE: Pneumatic time relay. Class 42, No. 189234 [announced by All-union Scientific Research Institute of Medical Instruments and Equipment (Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskikh instrumentov i oborudovaniya); Institute of Automation and Telemechanics (TECHNICAL CYBERNETICS) AN SSSR (Institut automatiki i telemekhaniki AN SSSR)] (TEKHNICHESKOY KIBERNETIKI)

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 102

TOPIC TAGS: pneumatic device, pneumatic control, automatic pneumatic control, TIME RELAY, TIME SWITCH

ABSTRACT: An Author Certificate has been issued for the pneumatic time relay shown in Fig. 1. To provide independent fine control of switching time the receiving nozzle of the jet unit is connected through uncontrolled resistance to the dead-end chamber, one end of which forms a diaphragm.

Card 1/2 UDC: 681.118.5-525

ACC NR: AP7002596

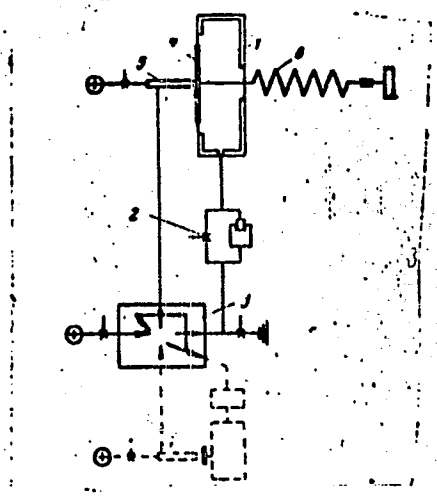

Fig. 1. Pneumatic time relay

1 - Dead-end chamber; 2 - uncontrolled resistance; 3 - jet unit; 4 - flapper; 5 - nozzle; 6 - controlled spring.

This diaphragm acts as the flapper of the switching unit and is coupled with a controlling spring. The switching unit nozzle is connected to the control line of the jet-unit. [WP]

SUB CODE: 13/ SUBM DATE: 14Dec65/ ATD PRESS: 5114

Card 2/2

ACC NR: AP7004781 SOURCE CODE: UR/0413/67/000/001/0094/0095

INVENTOR: Dmitriyev, V. N.

ORG: none

TITLE: Electropneumatic converter. Class 42, No. 190087.[announced by Institute of Automation and Telemechanics (Technical Cybernetics), AN SSSR (Institut avtomatiki i telemekhaniki (tekhnicheskoy kibernetiki)) AN SSSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1967, 94-95

TOPIC TAGS: pneumatic device, pneumatic control

ABSTRACT: The proposed converter contains an electro-acoustical converter, consisting of multivibrator and an earphone, and an acoustic-pneumatic converter. The acoust.-pneumatic converter incorporates a feed pipe and a receiver pipe which are coaxially positioned; the pipe ends are placed in a Helmholtz resonator tuned to the frequency of acoustical oscillations (see Fig. 1). Orig. art. has: 1 figure. [GS]

Card 1/2 UDC: 681.142.07-525:53.087.9

ACC NR: AP7004781

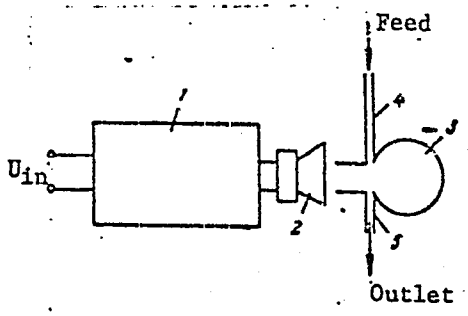

Fig. 1. Electro-pneumatic converter

1 - Multivibrator; 2 - earphone;
3 - Helmholtz resonator; 4 - feed pipe;
5 - receiver pipe.

SUB CODE: 09/ SUBM DATE: 09Aug65/

Card 2/2

18.3100 2408, 1087, 1454

S/136/61/000/005/003/008
E021/E106

AUTHORS: Reyfman, M.B., Gribov, A.I., Dmitriyev, V.N., and Losikova, M.A.

TITLE: The preparation of titanium by the iodide method

PERIODICAL: Tsvetnyye metally, 1961, 34 No.5, pp. 49-55

TEXT: The theory of the process is discussed and some results from an experiment for preparing titanium by the iodide method in apparatus of an industrial type are described. The main factors influencing the rate of reaction of the process are the temperature in the reaction chamber and the rate of migration of the molecules of gaseous titanium iodide. The temperature has a marked influence on both the rate of reaction and the character of the surface of the deposited metal. Fig.2 shows two rods of titanium formed at 1300 °C (top picture) and 1500 °C. The relation between the degree of dissociation of titanium iodide and its vapour pressure was determined from thermodynamics. Fig.3 shows this relationship (x axis - degree of dissociation; y axis - vapour pressure, in atmospheres, in the reaction vessel). At a vapour pressure of 0.009 atm the degree of dissociation is 0.1,

The preparation of titanium by ....

which explains why the process of dissociation at higher vapour pressures ceases. On the other hand, with a vapour pressure of 0.001 atm (corresponding to a temperature in the reaction vessel of 109 °C) the degree of dissociation is 0.9 and is sufficient for the process of thermal dissociation to occur. Tests were carried out to choose the most corrosion-resistant material for use in contact with titanium iodide and gaseous iodine. Nickel and nickel-based alloys were tried. The most resistant alloy was found to be Х20Н80 (Kh20N80) containing 80% nickel and 20% chromium. Industrial apparatus was constructed for the preparation of iodide titanium. It consisted of a cylindrical vessel of the Kh20N80 alloy. It was capable of producing 10 kg titanium per day. The charge of crude titanium was placed inside and the vessel was evacuated and heated to 400-450 °C. The calculated quantity of iodide was in a sealed glass flask in the roof of the vessel. The vessel was disconnected from the evacuating system when the required vacuum was obtained and the iodine allowed to enter the reaction vessel. After leaving some time for the formation of titanium iodide, an electric current was passed through a titanium wire (3 - 4 mm thick) inside the vessel and the

The preparation of titanium by .....

precipitation of iodide titanium began. The reaction vessel was immersed in a vessel containing water heated to 100 °C. Under these conditions a rod of iodide titanium 18-19 mm in diameter could be obtained. The iodide titanium obtained showed a decrease in metallic impurities and especially in gaseous impurities. Wire, thin strip and thin-walled tubes could be prepared from it, showing its high plasticity.

Acknowledgements are expressed to O.N. Krokhina, B.A. Kondratov and S.Kh. Ruzayeva for their participation in the work; to Ye.K. Safronov, A.A. Kuz'min, A.S. Nazarov and G.F. Ivanovskiy (all of the Scientific Research Institute), M.Ya. Smelyanskiy, Z.A. Lankin (deceased), N.I. Kharlamov and Ya.E. Gershzon (all of Tsentroprom-elektropech') for their assistance in constructing the industrial apparatus; and to L.K. Pyatibokov and I.D.Voronkin for constructing the special automatic control device.

There are 4 figures and 4 references: 1 Soviet and 3 English.

The English language references are:

Ref.1: Blocher, I.M. and Campbell I.E., J.Americ.Chem.Soc., 1947, 69, 9, 2100-2101.

Card 3/4

S/136/61/000/005/003/008
E021/E106

The preparation of titanium by ...

Ref.2: O.I.C. Runnols and L.M. . Pidgeon, J. of Metals, 1952, 4; 8; 843-847.
Ref.3: L. Quill, The chemistry and metallurgy of miscellaneous materials. Thermodynamics, 1950.

Fig.2

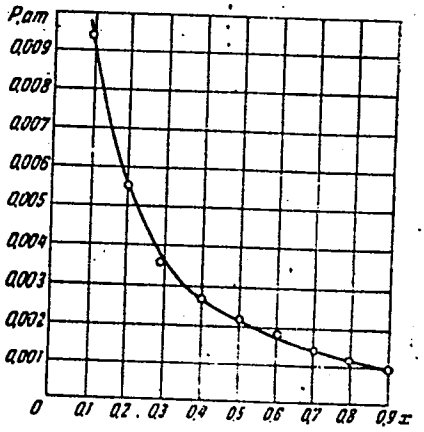

Fig.3

Card 4/4

ALEKSEYEV, G.P.; ANDON'YEV, V.S.; ARNGOL'D, A.V.; BASKIN, S.M.; BASHMAKOV, N.A.; BEREZIN, V.D.; BERMAN, V.A.; BIYANOV, T.F.; GORBACHEV, V.N.; GRECHKO, I.A.; GRINBUKH, G.S.; GROMOV, M.F.; GUSEV, A.I.; DEMENT'YEV, N.S.; DMITRIYEV, V.P.; DUL'KIN, V.Ya.; ZVANSKIY, M.I.; ZENKEVICH, D.K.; IVANOV, B.V.; INYAKIN, A.Ya.; ISAYENKO, P.I.; KIPRIYANOV, I.A.; KITASHOV, I.S.; KOZHEVNIKOV, N.N.; KORMYAGIN, B.V.; KROKHIN, S.A.; KUDOYAROV, L.I.; KUDRYAVTSEV, G.N.; LARIN, S.G.; LEBEDEV , V.P.; LEVCHENKOV, P.N.; LEMZIKOV, A.K.; LIPGART, B.K.; LOPAREV, A.T.; MALYGIN, G.F.; MILOVIDOVA, S.A.; MIRONOV, P.I.; MIKHAYLOV, B.V., kand. tekhn. nauk; MUSTAFIN, Kh.Sh., kand. tekhn. nauk; NAZIMOV, A.D.; NEFEDOV, D.Ye.; NIKIFOROV, I.V.; NIKULIN, I.A.; OKOROCHKOV, V.P.; PAVLENKO, I.M.; PODROBINNIK, G.M.; POLYAKOV, G.Ya.; PUTILIN, V.S.; RUDNIK, A.G.; RUMYANTSEV, Yu.S.; SAZONOV, N.N.; SAZONOV, N.F.; SAULIDI, I.P.; SDOBNIKOV, D.V.; SEMENOV, N.A.; SKRIPCHINSKIY, I.I.; SOKOLOV, N.F.; STEPANOV, P.P.; TARAKANOV, V.S.; TREGUBOV, A.I.; TRIGER, N.L.; TROITSKIY, A.D.; FOKIN, F.F.; TSAREV, B.F.; TSETSULIN, N.A.; CHUBOV, V.Ye., kand. tekhn. nauk; ENGEL', F.F.; YUROVSKIY, Ya.G.; YAKUBOVSKIY, B.Ya., prof.; YASTREBOV, M.P.; KAMZIN, I.V., prof., glav. red.; MALYSHEV, N.A., zam. glav. red.; MEL'NIKOV, A.M., zam. glav. red.; RAZIN, N.V., zam. glav. red. i red. toma; VARPAKHOVICH, A.F., red.; PETROV, G.D., red.; SARKISOV, M.A., prof., red.; SARUKHANOV, G.L., red.; SEVAST'YANOV, V.I., red.; SMIRNOV, K.I., red.; GOTMAN, T.P., red.; BUL'DYAYEV, N.A., tekhn. red.

(Continued on next card)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000410520014-4"

ALEKSEYEV, G.P.---(continued). Card 2.

[Volga Hydroelectric Power Station; a technical report on the design and construction of the Volga Hydroelectric Power Station (Lenin), 1950-1958] Volzhskaia gidroelektrostantsiia; tekhnicheskii otchet o proektirovanii i stroitel'stve Volzhskoi GES imeni V.I.Lenina, 1950-1958 gg. V dvukh tomakh. Moskva, Gosenergoizdat. Vol.2.[Organization and execution of construtions and assembly work] Organizatsiia i proizvodstvo stroitel'no-montazhnykh rabot. Red. toma: N.V.Razin, A.V.Arngol'd, N.L. Triger. 1962. 591 p. (MIRA 16:2)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Razin).
(Volga Hydroelectric Power Station (Lenin)--Design and construction)

KRUGLOV, M.G., kand.tekhn.nauk; YEGOROV, Ya.A., inzh.; DMITRIYEV, V.P., inzh.

Improving the apparatus for testing engines. Trakt. i sel'khozmash. 33 no.5:18-20 My '63. (MIRA 16:10)

1. Moskovskoye vysshoye tekhnicheskoye uchilishche im. Baumana.

KRUGLOV, M.G., kand.tekhn.nauk; DMITRIY V, V.P., aspirant; YEGOROV, Ya.A., aspirant

Improving the economic efficiency of an engine with a power-driven supercharger operating with partial loads. Izv.vys.ucheb.zav.; mashinostr. no.8:205-211 '63. (MIRA 16:11)

1. Moskovskoye vysshaye tekhnicheskoye uchilishche imeni Baumana.

DMITRIYEV, V.P.

Reasons for insufficient utilization of water transportation for lumber. Nauch.trudy LTA no.95:49-60 '61. (MIRA 16:2)
(Lumber--Transportation)

DMITRIEV, V.P.

Deposits of ores of the late complex metal paragenesis in the Zmeinogorsk region in the Altai. Sov. geol. 3 no. 12:115-119 D '60. (MIRA 14:3)

1. Rudno-Altayskaya ekspeditsiya Zapadnosibirskogo upravleniya i Kolchiginskaya geologorazvedochnaya partiya.
(Altain Mountains--Ore deposits)

VYDRIN, V.N. ; DMITRIYEV, V.P.

Geological characteristics of the Zmeinogorsk ore-bearing area (Rudnyy Altai). Geol.rud. mestorozh. no.6:46-60 N-D '61. (MIRA 14:3)

1. Moskovskiy gosudarstvennyy universitet, Zapadnosibirskoye geologicheskoye upravleniye.
(Altai Mountains—Geology, Economic)

KRUGLOV, M.G., doktor tekhn.nauk,prof.; DMITRIYEV, V.P., aspirant

Effect of exhaust pipe diameter on gas-exchange indices and performance of a two-cycle engine. Izv.vys.ucheb.zav.; mashinostr. no. 12:158-166 '63. (MIRA 17:9)

1. Moskovskoye vysshaya tekhnicheskoye uchilishche imeni Baumana.

DMITRIYEV, V. P.

AUTHOR: None given

86-11-29/31

TITLE: To Be Published ... (Vykhodyat iz pechati ...)

PERIODICAL: Vestnik Vozdushnogo Flota, 1957, Nr 11, p. 90 (USSR)

ABSTRACT: It is announced that in the near future the following books will be published by the Military Publishing House of the Ministry of Defense of USSR:

1. Some Problems on the Theory of Automatic Aircraft Control (Nekotoryye voprosy teorii avtomaticheskogo upravleniya samoleta) by V. P. Dmitriyev;
2. The Fundamentals of the Theory of Aircraft Turbojet Engines (Osnovy teorii aviatsionnykh turboreaktivnykh dvigateley) by M. I. Vlasenko;
3. The Treatment and Storage of Aircraft Armament (Obrabotka i konservatsiya aviatsionnogo vooruzheniya) by O. V. Artemenko, V. V. Nazarov, F.D. Pilipenko, under the editorship of G. I. Krotov, Engr Lt Col.

AVAILABLE: Library of Congress

Card 1/1

AUTHOR: Dmitriyev, V.P.

TITLE: New Data on the Polymetallic Mineralization of Gornyy Altay (Novyye dannyye o polimetallicheskom orudenenii Gornogo Altaya)

SOV-132-58-9-1/18

PERIODICAL: Razvedka i okhrana nedr, 1958, Nr 9, pp 1-7 (USSR)

ABSTRACT: The author deals with the largest polymetallic deposit in the Gornyy Altay (the Shirgaytinskoye deposit) situated in the upper part of Peschanaya river basin and forming the central part of the Anuy-Chuya syncline composed of rocks of the Ordovician - Devonian period. The largest deposits are found in the Devonian rock formations, and the main ore bodies of these deposits are found in places of contact with carbonaceous rocks with interlaying intrusions of intensively dynamo-metamorphized albitophyres. Most of the ore bodies were enclosed in various calciferous slates. Two basic types of ores were found: lead-copper-zinc ores with a minor content of tungsten and copper-zinc ores with admixtures of molybdenum. By its type, the Shirgaytinskoye polymetallic deposit is of hydrothermal metasomatic origin formed in carbonaceous rocks under the screening influence of interlaying intrusions of albitophyres. The source of ore-bearing

Card 1/2

New Data on the Polymetallic Mineralization of Gornyy Altay

solutions, was presumably a plutonic magmatic hearth. The author explains the presence in the deposit of different mineral types of ores by the influence of enclosing rocks. The lead-copper-zinc ores were found in rocks containing large quantities of carbonates, and the copper-zinc- ores - in rocks with a large content of argillaceous material. As the region is insufficiently explored, the author foresees further discoveries of polymetallic deposits in the Gornyy Altay region.
There are 2 tables, 1 chart, 1 diagram, and 2 Soviet references.

ASSOCIATION: Karamyshevskaya geologorazvedochnaya partiya (The Karamyshevskiy Geological Prospecting Team)

1. Ores--USSR 2. Ores--Sources 3. Ores--Geology

Card 2/2

DMITRIYEV, Vladimir Pavlovich; KOMAN, Aleksandr Abramovich; RIMMER, A.I., nauchnyy red.; KAZAROV, Yu.S., red.; KAMOLOVA, V.M., tekhn.red.

[Rigging and devices for ship hull construction] Osnastka i prisposobleniia dlia sudokorpusnykh rabot. Leningrad, Gos. soiuznoe izd-vo sudostroit.promyshl., 1960. 205 p. (MIRA 13:5)
(Shipbuilding--Equipment and supplies)

TRESKUNOV, Petr Iosifovich; KOMAN, A.A., inzh., retsenzent; MALOV, A.N., inzh.; FEDOROV, N.A., inzh.; DMITRIYEV, V.P., inzh., otv.red.; LISOK, E.I., red.; KRYAKOVA, D.M., tekhn.red.

[Cutter and press-worker] Rezchik-pressovshchik. 2., perer. i ispr.izd. Leningrad, Gos.soiuznoe izd-vo sudostroit.promyshl., 1961. 146 p. (MIRA 15:2)
(Hulls (Naval architecture)) (Shipbuilding)

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L 14462-66
ACC NR: AP6002972 (N) SOURCE CODE: UR/0286/65/000/024/0147/0148

INVENTOR: Sinitskiy, B. A.; Kuznetsov, V. M.; Vaksman, A. Z.; Ratner, A. G.; Vikhman, B. A.; Rimmer, A. I.; Dmitriyev, V. P.; Rikhter, A. A.; Zagaytov, A. P.

ORG: none

TITLE: A universal form for hulls in shipbuilding 55 Class 65, No. 177291

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 147-148

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ABSTRACT: This Author's Certificate introduces a universal form for hulls in shipbuilding. The installation includes a foundation with standard elements, e.g. beams, stands and frames in a form depending on the members which make up the hull structure. The installation is designed for convenience in assembly, efficiency in the use of production area and economy of metal. The foundation is made up of anchored longitudinal or transverse channel or angle tracks. The projecting horizontal shelves of the tracks form T-slots above the level of the foundation by the thickness of a shelf. The standard elements are made with mating sockets for fastening

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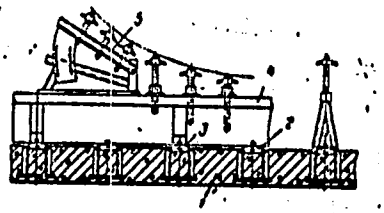

1 - foundation; 2 - tracks; 3 - horizontal shelves;
4 - standard element; 5 - metal units.

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